

REMARKS

I Disposition of Claims

Claims 1, 2, and 4-7 are currently pending. Claim 1 has been amended. The amendment is supported throughout the specification, for example on page 21, lines 6-7 and page 22, lines 17-19.

II Compliance with 35 USC 112, second paragraph

The Examiner has rejected Claims 1-7 under 35 U.S.C. § 112, second paragraph. The Examiner has indicated that "Claim 1 recites 'dissolving a film-forming polymer' and refers this to the overcoat layer. The film forming polymer should be an overcoat forming polymer." Applicant wishes to thank the Examiner for discussing the rejection in a telephone conversation on July 7, 2006, and the suggestion to the Applicant to address the issue by argument. Applicant also wishes to point out that the current Office Action provided no guidance as to why previous arguments were not considered persuasive to the Examiner.

The phrase "film-forming polymer" is a widely-used term of art that is well understood by those skilled in the art. As evidenced by the attached printout, a Google search of the exact term reveals about 16,300 results. As further evidence of the widely-accepted meaning of the term, a number of recent patents included this term in their claims, including those claims shown in the following table.

U.S. Patent	Claim
6,946,518	1
6,946,122	4
6,939,916	2
6,933,014	31
6,916,493	32
6,903,158	9
6,897,191	1
6,896,963	10
6,887,644	1

Moreover, the use of the term is clear in the specification, see paragraphs [0045]-[0047], and the phrase is used consistently throughout the specification in the manner that is widely accepted by those skilled in the art. Furthermore, one of skill in the art would understand that

the "film-forming polymer" may be just one component of the overcoat layer, so the term "overcoat forming polymer" would not be a more accurate choice of wording.

As can be seen from the above, "film-forming polymer" is a commonly used phrase with a widely accepted meaning to those skilled in the art. Therefore, the use of this term does not render the claim indefinite. Therefore, the rejection of the pending claims under 35 U.S.C 112, second paragraph should be withdrawn.

III Novelty and Non-Obviousness

The Examiner has rejected Claims 1-7 under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103(a) as obvious over JP 11-140360. Further, the Examiner has rejected Claims 1-7 under 35 USC 102(e) as being anticipated by Omatsu (US 6,117,685).

As amended, the claims recite the limitation "wherein the ozone indicator is sensitive to an ozone atmosphere having an ozone concentration of 1000 ppm or higher, whereby said ozone concentration of 1000 ppm or higher can be calculated as a function of a CT value determined from a change in color of the color-change layer." As discussed below, this is a novel and non-obvious element of the claimed invention in view of the cited references.

JP360 discloses an ozone indicator and ozone detecting ink composition. However, in the only example in JP360 0.3 ppm ozone was detected (See Test Example 1 at Paragraphs [0048] to [0049]. Similarly, Omatsu '685 relates to an ozone indicator and ozone detecting ink in which 0.3 ppm, 1 ppm or 5 ppm ozone were detected (See Test Examples 1 and 2). Thus, the ozone concentrations in the ozone atmospheres tested in these cited references were far below the recited range of 1000 ppm or higher. Therefore the claims cannot be anticipated by these references. Moreover, nothing in these references would suggest that such high concentrations of ozone could be tested using Applicants' recited combination of elements.

Prior to the claimed invention, a color change layer comprising an anthraquinone dye was known to undergo color change at low ozone concentrations. For example, in the cited references, color change could be obtained as low as 0.03ppm (See Paragraph [0036] and Test Example 1 of JP '360 and Test Examples 1 and 2 of Omatsu '685). Thus, using the indicators disclosed in these references, all of the experimental results would show a complete color change at less than 5 ppm. Thus, although the tests disclosed in these cited references were quite sensitive to low concentrations of ozone, they would be entirely useless for calculating ozone concentrations above 5 ppm. A user of the indicator of the cited references would not know from

the color-change layer disclosed in these references whether the ozone concentration of the atmosphere were 5 ppm or 1000ppm, much less whether it were 3000 ppm or even higher. The only fact that can be discerned from use of the indicator from the cited references is that the ozone concentration of the atmosphere is 3 ppm or higher, a rather broad range.

While one could detect that there is a concentration of at least 3 ppm, one would not be able to measure or evaluate ozone concentration at any levels above this concentration because the color change would have been completed at levels too low to be of use. Thus, based only on the cited references, one having ordinary skill in the art would be unable to measure or evaluate ozone concentrations in the recited ranges as a function of CT value, as presently recited by the claims.

The ozone indicator of the present invention can detect an ozone concentration of 1000 ppm or higher by employing the recited overcoat layer even though the color-change layer comprises an anthraquinone dye like JP360 or Omatsu ('685). As the cited references do not teach all the elements of the claims, a *prima facie* case of obviousness has not been established.

Furthermore, the overcoat layer recited in the presently pending claims serves to permit the detection of the recited high concentrations of ozone, not to protect a color-change layer, as asserted by the Examiner. Nothing in the cited references would lead one skilled in the art to expect that an ozone indicator having the specific overcoat layer can detect an ozone concentration of 1000 ppm or higher. Therefore, the results of measuring or evaluating these high concentrations of ozone that are recited in the claims were unexpected. These unexpected results would rebut a *prima facie* case of obviousness, even if present. Therefore, the rejections should be withdrawn and the claims allowed.


CONCLUSION

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of all outstanding rejections are respectfully requested. Allowance of the claims at an early date is solicited. If any points remain that can be resolved by telephone, the Examiner is invited to contact the undersigned at the below-given telephone number.

Respectfully submitted,

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